

Amendments to the Claims

This listing of the claims will replace all prior versions and listings of the claims in the application.

Listing of Claims

Claims 1-63 (cancelled)

Claim 64 (currently amended): A conductive ~~fluid~~ liquid jet cutting system for modifying a workpiece comprising:

a dispenser, comprising an electrically conductive crucible, for dispensing a jet stream of an electrically conductive ~~fluid~~ liquid, and

a power source indicating at least a first electrical connection to the fluid within the dispenser and a second electrical connection to the jet stream external to the dispenser.

Claim 65 (currently amended): The system of claim 64 wherein the crucible heats the ~~fluid~~ liquid.

Claim 66 (previously presented): The system of claim 64 wherein the dispenser comprises a jetting head.

Claim 67 (previously presented): The system 64 wherein the crucible comprises a top, a sidewall, and a bottom, wherein the top comprises an inlet and the bottom comprises an outlet.

Claim 68 (previously presented): The system of claim 64 wherein the crucible comprises one of boron nitride-zirconia-silicon carbide, Ytria-Stabilized-Zirconia, Magnesia-Stabilized-Zirconia, Calcia-Stabilized-Zirconia boron nitride, Cubic Zirconia, alumina, silica, silica composites, zirconium diboride, and graphite.

Claim 69 (previously presented): The system of claim 64 further comprising a heater coupled to the crucible.

Claim 70 (previously presented): The system of claim 69 further comprising a second power supply electrically coupled to the heater.

Claim 71 (currently amended): The system of claim 66 wherein the jetting head comprises an inlet for receiving a feed stock of the conductive ~~fluid~~ liquid.

Claim 72 (currently amended): The system of claim 64 wherein the conductive ~~fluid~~ liquid comprises mild steel, aluminum, aluminum alloy, tin, stainless steel, iron, cast iron, tool steel, copper, zinc, gold, silver, or platinum.

Claim 73 (previously presented): The system of claim 66 wherein the jetting head comprises a pressure containment vessel.

Claim 74 (previously presented): The system of claim 66 wherein the jetting head comprises an electrode disposed inside the crucible for establishing an electrical connection with the jet stream.

Claim 75 (currently amended): The system of claim 74 wherein said electrical connection comprises a feedstock of the conductive ~~fluid~~ liquid.

Claim 76 (previously presented): The system of claim 66 wherein the jetting head comprises an exit orifice.

Claim 77 (previously presented): The system of claim 66 wherein the jetting head further comprises a nozzle.

Claim 78 (previously presented): The system of claim 77 wherein the nozzle comprises a disk having a through orifice.

Claim 79 (previously presented): The system of claim 78 wherein the disk comprises a material selected from one of Ytria-Stabilized-Zirconia, Magnesia-Stabilized-Zirconia, Calcia-Stabilized-Zirconia, boron nitride-zirconia-silicon carbide, boron nitride, Cubic Zirconia, Alumina, Silica, Silica Composites, Zirconium Diboride.

Claim 80 (previously presented): The system of claim 78 wherein the through orifice comprises a circular cross section.

Claim 81 (previously presented): The system of claim 69 wherein the heater comprises one of an AC resistance heater, a DC resistance heater, an induction heater, or a combustion burner-heater arrangement.

Claim 82 (withdrawn): An electrically conductive metallic fluid jet cutting system for modifying a workpiece comprising:

a dispenser, comprising a jetting head, comprising an electrically conductive crucible and at least two inlets for receiving at least one feedstock of an electrically conductive metallic material, wherein the dispenser dispenses a jet stream of an electrically conductive

metallic fluid; and

a power source electrically coupled to the jet stream for providing electrical current to the jet stream.